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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,503	01/20/2004	Kioan Cheon	Cheon "F"	4102

7590 05/23/2006

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EXAMINER

HOFFBERG, ROBERT JOSEPH

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/761,503	Applicant(s) CHEON, KIOAN	
	Examiner Robert J. Hoffberg	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-15 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. The term "predetermined" and "versatile" in claim 15 is a relative term which renders the claim indefinite. The term "predetermined" and "versatile" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rumbut (US 5,740,018) in view of Morrison et al. (US 4,493,010).

With respect to Claim 12, Rumbut teaches a coolant jacket for cooling heat generating electrical elements (Col. 1, line 29) on a support member (Fig. 3, #150), said coolant jacket comprising: a pouch Fig. 1, #103) comprising flexible sidewalls (see Fig. 1) that meet and are connected together at a periphery (see Fig. 1), said pouch having an inner space (Col. 2, line 46, hollow); a coolant inlet (Fig. 1, #109) leading into the pouch and into the pouch body; a coolant outlet (Fig. 1, 118) leading outwardly from the

Art Unit: 2835

pouch while maintaining circulation space in the pouch for coolant so that coolant can enter the pouch, flow through the porous body, and then flow out from the coolant outlet. Rumbut fails to teach the body of porous material in the inner space of the pouch. Morrison et al. teaches a resilient body of porous material (Fig. 9, #122) in the inner space of a pouch (Fig. 9, #124); and said body of porous material being compressible (Col. 8, line 27). With respect to Claim 15, Morrison et al. further teaches that the body of porous material is a sponge (Fig. 9, #122 and Col. 8, lines 27-28) that is soft and loose for smooth circulation of a coolant, said sponge having a predetermined elasticity (Col. 8, line 27, soft) in order to establish circulation space in the pouch for a coolant (Col. 8, line 30, vented to the external environment) and establish a versatile contact elasticity. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the coolant jacket of Rumbut with that of Morrison et al. for the purpose of insuring good contact with the electrical components to compensate for pressure changes (Col. 8, line 35).

With respect to Claim 13, Rumbut further teaches that the pouch is bendable (see Fig. 1) to place a first portion (Fig. 1, #103 near side) of the pouch on a first side of the support member and a second portion (Fig. 1, #105 far side) of the pouch on a second side of the support member.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rumbut in view of Morrison et al. (US 4,493,010) as applied to the above claims, and further in view of Malhammar (US 6,662,782).

With respect to Claim 14, Rumbut in view of Morrison et al. teaches the cooling jacket of the above claims. Rumbut teaches a folded pouch with its first portion pressed against a first side of the support member and its second portion pressed against the second side of the support member. While Rumbut fails to teach a clip, it would be obvious that a means needs to be provided to fasten the pouch to the first and second sides of the support structure. Malhammar teaches a clip (Fig. 3, #105) for holding the (Fig. 4, #111) pouch on the support member (Fig. 4, #113). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the coolant jacket of Rumbut in view of Morrison et al. with that of Malhammar to use a clip or other fastening device to maximize surface contact of the cooling jacket to the electrical elements.

Allowable Subject Matter

6. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claim 16 is allowable over the art of record because the prior art does not teach or suggest that a cooling jacket "wherein one of said coolant inlet and said coolant outlet terminates in the resilient body of porous material adjacent the first edge of the resilient body of porous material and the other of said coolant inlet and coolant outlet terminating closely adjacent the second edge of the resilient body of porous material."

The aforementioned limitations in combination with all remaining limitations of the respective claims are believed to render said claim 16 over art of record.

Response to Arguments

7. Applicant's arguments, filed 5/2/06, with respect to the newly added amended claims 12-16 have been fully considered. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made above.
8. Objection to specification and drawing are withdrawn based upon the amended application.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taisuke (JP 03-030399) teaches a cooling jacket comprising of a pouch, a coolant inlet and a coolant outlet wherein the pouch is bendable to place a first portion on a first side of a support member and a second portion on a second side of the support member. Salt et al. (AU 639775) in Fig. 2 teaches a resilient body of porous material in the inner space; and said body of porous material being compressible an amount sufficient to allow it and a sidewall of the pouch to at least partially conform to the shape of the heat generating electrical elements on the support member while maintaining circulation space in the pouch for coolant so that coolant can enter the pouch, flow through the porous body, and then flow out from the coolant outlet. Larson et al. (US 5,560,423) teach clips (#32) to a flexible heat dissipation device to a substrate. Mizzi (US 5,245,508) teaches a cooling jacket a sidewall of the pouch to at least partially conform to the shape of the heat generating electrical

Art Unit: 2835

elements on the support member. Umezawa (US 5,329,419) teaches wherein one of said coolant inlet and said coolant outlet terminates in the body adjacent the first edge and the other of said coolant inlet and coolant outlet terminating closely adjacent the second edge.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

Art Unit: 2835

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJH

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05/19/06

MICHAEL DATSKOVSKIY
PRIMARY EXAMINER